



JP10118486A: CONCENTRATION OF DILUTE NITROGEN OXIDE

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Abstract: **Problem to be solved:** To adsorb and remove gas containing dilute NO_x with a low-cost adsorbent by dehydrating gas containing dilute nitrogen oxide and bringing the dehydrated gas into contact with an adsorbent consisting of manganese oxide borne by a carrier selected from crystalline silicate, alumina, titania, zirconia and silica, of a specific chemical composition.

Solution: When concentrating dilute nitrogen oxide (NO_x) contained in a gas polluted on a road or in a tunnel, the gas containing the dilute NO_x is brought into contact, in a state in which the gas is dehydrated, with an adsorbent comprising manganese oxide borne by at least, one type of carrier selected from crystalline silicate, alumina, titania, zirconia and silica which have a chemical composition expressed by formula $(1 \pm 0.8) R_2O \cdot aM_2O_3 \cdot bAl_2O_3 \cdot cMeO \cdot ySiO_2$ and also a specific X-ray diffraction pattern, and thereby, the nitrogen oxide is removed by adsorption at an ordinary temperature. In addition, the adsorbent is regenerated by supplying a hot air to the adsorbent into which the nitrogen oxide is adsorbed and desorbing the concentrated nitrogen oxide.

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Foreign References: none

(No patents reference this one)



Alternative

